TEXAS HIGHER EDUCATION COORDINATING BOARD

Summary Notes/Minutes

Biology Field of Study Advisory Committee Meeting

1200 East Anderson Lane, Board Room

Austin, Texas

January 8, 2018, 1:00 PM – 5:00 PM

January 9, 2018, 8:30 AM – 12:00 PM

The webcasts of this meeting are available at the following links:
https://www.youtube.com/watch?v=vYY0ydmopj0

https://www.youtube.com/watch?v=_qxZ9OjiSwk

AGENDA ITEM	ACTION
I. Welcome, call to order, and introductions	The Committee convened at 1:00 PM. Allen Michie called the meeting to order. The following committee members present: Warner B. Bair III, Lone Star College-CyFair Judith Ball, Texas A&M University-Commerce Andrea Barrett, Angelina College Debbie Barton, Cisco College Margaret Brown Marsden, Midwestern State University Amanda Chau, Blinn College Jim Dobberstine, Lee College John R. Hatherill, Del Mar College Percy Jordan, Lamar State College-Port Arthur Bridgette Kirkpatrick, Collin College Manish Kumar, Texas State University Chris Mares, Texas A&M University-San Antonio Cherie McCollough-Texas A&M University-Corpus Christi Murad Odeh, South Texas College Larry Rohde, University of Houston-Clear lake Kathryn Ryan, Texas A&M University David W. Sissom, West Texas A&M University Uma Srikanth, The University of Texas at Dallas Teanna Staggs, San Antonio College Mark Storey, Texarkana College Sandra Westmoreland, Texas Woman's University Mary Wisgirda, San Jacinto College Frederic Zaidan, The University of Texas Rio Grande Valley

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	The following committee members were absent: John Placyk, The University of Texas at Tyler Coordinating Board Staff present: Rebecca Leslie, Program Director Allen Michie, Program Director Rex Peebles, Assistant Commissioner Garry Tomerlin, Deputy Assistant Commissioner
II. Consideration of election of Chair and Co-Chair	Two members were nominated to serve as co-chair from two-year institutions: Bridgette Kirkpatrick (Collin College) and Jim Dobberstine (Lee College). Two members were nominated from four-year institutions: Margaret Brown Marsden (Midwestern State University), and Judith Ball (Texas A&M University-Commerce). Jim Dobberstine and Margaret Brown Marsden were elected. Term limits of one, two, and three years were randomly assigned to members. Co-chairs received three-year terms.
III. Consideration of election of recording secretary	Amanda Chau volunteered to serve as recording secretary and was elected by acclamation.
IV. Public testimony	No members of the public were present to testify.
V. Overview of Field of Study rules and mission	Michie provided an overview of the Fields of Study (FOS) statute, how it is part of a wider range of transfer success initiatives, and how it contributes to the Texas Higher Education Coordinating Board's 60x30TX strategic plan. Michie and Tomerlin answered questions from committee members.
VI. Discussion and consideration of Biology Field of Study curriculum	The committee discussed the need to have 18 semester credit hours (SCH), or 6 to 8 classes, included in the Biology FOS. These FOS courses would be accepted for all Biology tracks and related degree programs. The committee agreed unanimously that labs are essential to science courses, whether they are bundled together as 4 SCH courses (lecture and lab) or as 3+1 SCH credit courses (separate lecture and lab).

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	In response to discussion on the first day, Garry Tomerlin discussed an example of a Tuning document and emphasized the need for an FOS in place of the Tuning agreement. An FOS will allow transfer across the all Texas public institutions of higher education, including between 4-year and 4-year institutions. The committee reviewed and discussed the need to include Math courses such as College Algebra (MATH 1314), Plane Trigonometry (MATH 1316), Calculus I and II (MATH 2313/2413 and 2314/2414), and Statistics (MATH 1342) in the Biology FOS. The committee reviewed and discussed the need to include Chemistry courses such as General Chemistry I and II (CHEM 1411 and 1412), and Organic Chemistry I and II (CHEM 2423 and 2425) in the Biology FOS. Concerns were expressed regarding 200-level vs. 300-level Organic Chemistry, and suggestions were made that a follow-up effort to revise learning outcomes may increase rigor in these courses. Similar concerns were expressed regarding the rigor of 200-level Microbiology compared to 300-level Microbiology. The committee reviewed and discussed which Biology courses should be included in the FOS. Committee members agreed that BIOL 1406 and 1407 (Biology for Science Majors I and II) should be included. Some committee members argued that courses such as Anatomy & Physiology (BIOL 2401 and 2402), Microbiology (BIOL 2421), Genetics (BIOL 2416), and Environmental Biology (BIOL 2406) might be too specific to be included in FOS. Some committee members argued that only major courses should be considered as part of the FOS. Other Biology courses such as General Botany and General Zoology were rejected due to the likelihood of limited transferability. The committee also discussed including Physics courses such as College Physics I and II in the FOS. Before adjourning, the co-chairs asked the committee to review the documentation and consider what had been discussed, and they requested that each committee member come up with a list of courses that should be included in Biology FOS. Committee members would email the list to Allen Michie before our meeting on

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	January 9 for compilation. The meeting was adjourned for the day at 4:35 PM. The meeting was called back to order at 8:30 AM on January 9, 2018. The committee reviewed the list of FOS courses that individual members generated overnight. The top six courses that received the most votes were BIOL 1406 (or BIOL 1306/1106), BIOL 1407 (or BIOL 1307/1107), CHEM 1411 (or CHEM 1311/1111), CHEM 1412 (or CHEM 1312/1112), CHEM 2423 (or CHEM 2323/2123), and PHYS 1401 (or PHYS 1301/1101). A series of motions were made based upon the results. Marsden made a motion to include BIOL 1406 (or BIOL 1306/1106) and BIOL 1407 (or BIOL 1307/1107) in the FOS. The motion passed, 20 to 2. Marsden made a motion to replace BIOL 1407 with BIOL 1414. The committee discussed replacing BIOL 1407 with BIOL 1414 because BIOL 1407 may not be suitable for workforce. The motion failed, 19 to 3. Marsden made a motion to include CHEM 1411 (or CHEM 1311/1111) and CHEM 1412 (or CHEM 1312/1112) in the FOS. The motion passed unanimously. Marsden made a motion to include CHEM 2423 (or CHEM 2323/2123) in the FOS. The motion passed, 21 to 1. Marsden made a motion to include PHYS 1401 (or PHYS 1301/1101) in the FOS. The committee discussed concerns about including Physics in the Biology FOS, including requirements for teacher certification. The motion passed, 19 to 3. Marsden made a motion to include Math courses in the FOS. After discussion, most committee members agreed that because Algebra is a prerequisite for PHYS 1401, there was no need to include additional Math courses in the FOS. The motion failed, 19 to 3. Marsden made a motion to include additional Biology courses in the FOS. In discussion, committee members expressed concern that there would be more Chemistry courses in the FOS than Biology courses, and there would be no sophomore-level biology in the FOS. The

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	committee also discussed the need to review local articulation agreements along with the FOS. The motion failed, 17 to 4. Marsden made a motion to include additional Chemistry courses in the FOS. Committee members expressed concern that Organic Chemistry II should be included because Organic Chemistry I was in the FOS. The committee discussed the advantages and disadvantages of including both Organic Chemistry I and II in the FOS and ownership issues with Organic Chemistry taught by both 2-year and 4-year institutions. The motion failed, 17 to 5. Marsden made a motion to include Organic Chemistry II in the FOS. The motion failed, 12 to 10. Marsden made a motion to approve the following 24 SCH curriculum for the FOS: • Biology for Science Majors with Lab I (BIOL 1406 or BIOL 1306 and BIOL 1106) • Biology for Science Majors with Lab II (BIOL 1407 or BIOL 1307 and BIOL 1107) • General Chemistry with Lab I (CHEM 1411 or CHEM 1311 and CHEM 1111) • General Chemistry with Lab II (CHEM 1412 or CHEM 1312 and 1112) • Organic Chemistry with Lab I (CHEM 2423 or CHEM 2323 and CHEM 2123) • College Physics with Lab I (PHYS 1401 or PHYS 1301 and PHYS 1101) The motion passed unanimously. The committee noted that six or more SCH in the FOS can be expected to count toward core curriculum requirements.
VII. Overview of timeline for public comments and approval	The committee discussed what to prepare for in the public comments, including concerns about Organic Chemistry and issues of sophomore transfer courses. Peebles explained that an email would be sent to institutional leadership (Presidents or Chancellors, Chief Academic or Executive Officers, and Coordinating Board liaisons) notifying them about the beginning of the public comment period. Institutions and the public will have 30

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	days to submit their comments. Michie explained that committee members will be asked to respond to each comment and adjust the FOS if necessary. Marsden made a motion to authorize the co-chairs to finalize the meeting minutes. Michie stated that a draft of the meeting minutes would be sent to committee members first for comment and corrections. Michie said that the minutes and a YouTube video recording of the meetings will be available on the Coordinating Board website. The motion passed unanimously. Margaret Brown Marsden made a motion to authorize the co-chairs to finalize the FOS after receiving public comments. The motion passed unanimously.
VII. Adjournment	The meeting was adjourned at 10:45 AM.

Addendum on the Response to Public Comments

The Texas Education Code, Chapter 61, Section 61.823, Field of Study Curriculum: states that the field of study is a "block of courses may be transferred to a general academic teaching institution and must be substituted for that institution's lower division requirements for the degree program for the field of study into which the student transfers, and the student shall receive full academic credit toward the degree program for the block of courses transferred."

In developing the Biology FOS, the committee sought to consider several competing concerns, including the number of SCH required to complete an academic associate degree program (between 60-66 credits), the 42-credit core curriculum, and the curriculum that provided the broadest background necessary for entry into a four-year degree program. The recommendations from the public comments were reviewed by committee members and put forward for deliberation and an electronic vote. The outcomes of these votes are as follows:

Course in original proposed FOS	Votes to Retain	Votes to Eliminate
BIOL1406 Biology for Science Majors with Lab I	**15**	**1**
BIOL1407 Biology for Science Majors with Lab II	**15**	**1**
CHEM1411 General Chemistry with Lab I	**14**	**2**
CHEM1412 General Chemistry with Lab II	**14**	**2**
CHEM2423 Organic Chemistry with Lab I	**12**	**4**
PHYS1401 College Physics with Lab I	**10**	**6**

Final Biology FOS:

Course Title	Course Number	Semester Credit Hours
Biology for Science Majors with Lab I	BIOL 1406 or BIOL 1306 and BIOL 1106	4
Biology for Science Majors with Lab II	BIOL 1407 or BIOL 1307 and BIOL 1107	4
General Chemistry with Lab I	CHEM 1411 or CHEM 1311 and CHEM 1111	4
General Chemistry with Lab II	CHEM 1412 or CHEM 1312 and 1112	4
Organic Chemistry with Lab I	CHEM 2423 or CHEM 2323 and CHEM 2123	4
College Physics with Lab I	PHYS 1401 or PHYS 1301 and PHYS 1101	4
TOTAL		**24**